

# Muhammad Aswan Syahputra

SENSORY SCIENTIST · SENSOMETRICS SPECIALIST

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*I would like to recognize myself as a Food Data Scientist. I have an expertise in Sensory Science with a Food Technology background, a passion in data analysis and visualisation, an eagerness in R statistical programming, and a hobby in developing analytical web application.*

## Education

### Wageningen University and Research

Wageningen, The Netherlands

MASTER IN FOOD TECHNOLOGY, SENSORY SCIENCE SPECIALISATION

2016-2018

- Thesis: "Observation of Chewing Activity using Photoplethysmography (PPG) method". Supervisors: Monica Mars and Chirstos Diou.
- Internship: "Development of SenseHub: an integrated web application for sensory analyses". Supervisors: Kiki Fibrianto and Betina Piqueras-Fiszman.
- Excelled in: Advance Sensory Science and Sensometrics (MCB-32806), Integrated Sensory Science (MCB-33306), Instrumental Sensory Science (HNE-30606), Product and Process Design (FQD-60312), and Advance Statistics (MAT-20306).
- Granted with Indonesian Education Scholarship from Indonesia Endowment Fund of Education (LPDP).
- CGPA of 3.45/4.00 (conversion).

### Universitas Brawijaya

Malang, Indonesia

BACHELOR IN AGRICULTURAL PRODUCT TECHNOLOGY, FOOD SCIENCE AND TECHNOLOGY PROGRAM

2011-2015

- Thesis: "Exploratory study: the influence of iced-coffee drinking methods to consumers' multisensory perception utilizing Rate-all-that-Apply (RATA) method". Supervisors: Kiki Fibrianto and Indria Purwantiningrum.
- Internship: "Sensory evaluation of specialty coffee using cups tasting procedure". Supervisors: Kiki Fibrianto and Yusianto.
- Excelled in: Food Product Development and Sensory Evaluation, Food Processing Technology, and Statistic and Computation.
- Granted with PPA Scholarship from Ministry of Research, Technology and Higher Education of Indonesia.
- CGPA of 3.81/4.00.

## Experience

### RESEARCH

#### Consumer Preference and Satisfaction Analysis on Croissant in Malang Area

Selangor, Malaysia

KUALA LUMPUR INTERNATIONAL AGRICULTURE, FORESTRY & PLANTATION CONFERENCE (KLIAFP)

2018

- Researchers: Jaya Mahar Maligan, Yuke Pamelasari, Muhammad Aswan Syahputra.
- In this research we investigated various external product properties that may give contribution to consumer preference and satisfaction. By using External Preference Mapping method, we were able to discover the perceptual mapping of various Croissant brands and the segmentation of consumers group.

#### SenseHub: an integrated web application for sensory analyses

Malang, Indonesia

INTERNATIONAL COFERENCE ON GREEN AGROINDUSTRY AND BIOECONOMIC (ICGAB)

2018

- Researchers: Muhammad Aswan Syahputra, Kiki Fibrianto, Eka Shinta Wulandari.
- In this research we compared the users' experience when using generic statistical software versus SenseHub for performing sensory data analyses. SenseHub is a web application that was developed by the author to make sensory data analysis easier while embedded with plenty of state-of-the-art sensometrics procedures.

#### Observation of Chewing Activity using Photoplethysmography (PPG) Method

Wageningen, The Netherlands

MASTER THESIS AT WAGENINGEN UNIVERSITY AND RESEARCH

2018

- Researchers: Muhammad Aswan Syahputra, Monica Mars, Christos Diou.
- In this research we developed algorithms to monitor chewing activity during eating solid and semi-solid foods using a new sensor, Photoplethysmography (PPG). We measured the performance of the proposed algorithms and made comparison with the existing procedures for monitoring chewing, i.e. video recording analysis and Electro Myography (EMG) method.

#### Effects of Delivery Methods to Multisensory Perceptions: a Review

Malang, Indonesia

JURNAL PANGAN DAN AGROINDUSTRI

2016

- Researchers: Muhammad Aswan Syahputra, Kiki Fibrianto, Indria Purwantiningrum.
- In this concise review article we were discussing the possible effect of delivery methods of food and drink to multisensory perceptions during eating.

#### Exploratory Study: the Influence of Instant Iced-Coffee Drinking Methods to Consumers' Multisensory Perceptions Utilizing Rate-all-that-Apply (RATA) Method

Malang, Indonesia

BACHELOR THESIS AT UNIVERSITAS BRAWIJAYA

2015

- Researchers: Muhammad Aswan Syahputra, Kiki Fibrianto, Indria Purwantiningrum.
- In this research we asked participants to consume iced-coffee in three ways: drinking using straw; immediate drinking from the glass; and tasting using spoon. We discovered that the difference in drinking method may alter consumers' multisensory perception during drinking.

## WORK

### Sensolution.ID – Food Sensory and Sensometrics Consulting

Bandung, Indonesia

#### SENSORY SCIENTIST

Nov 2018 – Present

- Developed a software for sensory data collection and analyses.
- Delivered trainings to clients for advance sensory methods and analyses.
- Assisted clients to arrange, design, and perform sensory research.

### R Academy of Telkom University

Bandung, Indonesia

#### INSTRUCTOR

May 2019 – Present

- Designed syllabus for R training courses.
- Delivered training for R courses, including: introduction to R for data science, data visualisation in R, machine learning in R, fundamental tidy data science in R.

### Sensory and Applied Food Research Group at Universitas Brawijaya

Malang, Indonesia

#### INTERN

Apr 2018 – Jul 2018

- Developed prototype of a new software for sensory data analyses.
- Delivered lectures to students in sensory evaluation and methods course.
- Conducted research to compare users' experience between two different softwares when performing sensory data analyses.

### Research Consultancy and Data Analysis Services

Indonesia – The Netherlands

#### INDEPENDENT FREELANCE

2014 – Present

- Assisted clients to properly choose and design an appropriate food research.
- Assisted clients to learn and analyse data collected from food research.
- Developed an analytical software to help clients analysing data.

### Indonesian Coffee and Cocoa Research Institute (ICCRI)

Jember, Indonesia

#### INTERN

Dec 2013 – Feb 2014

- Assisted and prepared the procedure to evaluate sensory characteristic of specialty coffee.
- Assisted sensory evaluation of chocolate products

### Faculty of Agricultural Technology, Universitas Brawijaya

Malang, Indonesia

#### ASSISTANT FOR LABORATORY PRACTICUM

2012 – 2015

- Prepared syllabus for laboratory practicum.
- Assisted, supervised, and evaluated students performance during laboratory works.
- Laboratory of Sensory Analysis, Laboratory of Post-harvest Processing Technology, and Laboratory of Chemistry.

## External Activity

### Komunitas R Indonesia

Indonesia

#### INITIATOR

2016 – Present

- Komunitas R Indonesia is a non-profit community for Indonesian to learn and share knowledge about R statistical programming language. I initiated this community back in 2016 and now it has more than 1000 members came from cities in Indonesia. Aside from managerial activity, in several occasions I also gave presentation and training to the members during community meetup. Additionally, I share my knowledge about R programming in Youtube video in hope that it can be beneficial to broader audience.

### Association of Indonesian Education Scholarship Awardee in Wageningen University and Research

Wageningen, The Netherlands

#### COORDINATOR

Sep 2016 – Sep 2017

- The massive number of Indonesian scholarship awardee in Wageningen University and Research introduces challenge in communication, sharing of information, and management between students and Indonesian government. I took an initiative and an opportunity to help both students and Indonesian government to face these challenges. Furthermore, I also assisted the students who had issues or problems in studying, financial, administration, and daily life.

### Food Sensory Research Group Universitas Brawijaya

Malang, Indonesia

#### MEMBER AND DATA ANALYST

2015 – Present

- Food Sensory Research Group was the first student group in Universitas Brawijaya that focused in sensory science and research. In this group we constantly have discussion about new issues in sensory science, advance sensory methods, how to handle complexity in data, and practical applications of sensory science in Food Technology domain.

### Angklung Wageningen from Indonesia Students Association of Wageningen

Wageningen, The Netherlands

#### HEAD OF REHEARSAL DIVISION

2016 – 2017

- Angklung Wageningen is a group under Indonesian Students Association of Wageningen (ISAW) that focused to conserve and introduce “Angklung”, a traditional musical instruments from Jawa Barat in Indonesia, to both Indonesian and non-Indonesian audience.

### Saman Dance ‘Ratoeh Duek’ from Indonesia Students Association of Wageningen

Wageningen, The Netherlands

#### MUSICIAN

2016 – 2017

- Saman Dance ‘Ratoeh Duek’ is a group under Indonesian Students Association of Wageningen (ISAW). We constantly performed “Saman” dance, a traditional dance from Aceh in Indonesia, in several events attended by Indonesian and non-Indonesian audience living in Netherlands.

- I volunteered to help and assist students in studying several courses taught in Food Science and Technology department, including: Fundamentals of Food Process Engineering, Food Process Engineering, Research Methodology and Experimental Design, and Statistics and Computation.

## Presentation

### Bootcamp R for data science

Bandung, Indonesia

PUBLIC WORKSHOP AT R ACADEMY TELKOM UNIVERSITY

20-24 May 2019

- R essentials, working with version control system, data science workflow using tidyverse in R, machine learning and statistics, and case study of common machine learning problems

### Data carpentry with tidyverse

Jakarta, Indonesia

KOMUNITAS R INDONESIA MEETUP AT ALGORITMA EDUCATION CENTER

11 May 2019

- Definition of data carpentry for handling data, common functions for data transformation, scrapping and cleaning data from webpage

### Mastering data visualisation

Bandung, Indonesia

PUBLIC WORKSHOP AT R ACADEMY TELKOM UNIVERSITY

13 April 2019

- Introduction to Grammar of Graphics, building a graph layer by layer, creating various types of data visualisation and customisation, manipulating graph looks and feels

### R introduction for data science

Bandung, Indonesia

PUBLIC WORKSHOP AT R ACADEMY TELKOM UNIVERSITY

6 April 2019

- R fundamentals, importing data from various sources, performing data manipulation, creating data visualisation, and building models and iteration

### Let's build your first RStudio snippets and addins

Jakarta, Indonesia

KOMUNITAS R INDONESIA MEETUP AT PERBANAS INSTITUTE

23 March 2019

- Make use of RStudio snippets to write common codes, introduction to addins, writing custom code snippets, and creating an R package containing addins

### Introduction to R (+) for data science

Bandung, Indonesia

KOMUNITAS R INDONESIA MEETUP AT TELKOM UNIVERSITY

22 February 2019

- Introduction to R, empowering R with RStudio+git, glimpse of tidyverse packages collection, chaining multiple operations in R, and practical activity on analysing Indonesia presidential election data

### R (+) for data science

Bandung, Indonesia

DATASCIENTALK HIMATIKA BANDUNG INSTITUTE OF TECHNOLOGY

26 January 2019

- R as statistical programming language, RStudio as IDE, git+GitHub as version control system, and tidyverse for data science activity

### R+RStudio tips and tricks: hidden gems to improve workflow

Jakarta, Indonesia

KOMUNITAS R INDONESIA MEETUP AT MICROSOFT INDONESIA

19 January 2019

- Trivia in R statistical programming language, guidelines for coding style, advices on how to setup R project, helpful RStudio shortcuts and tricks to improve workflow

### Workshop for sensory data analyses

Bogor, Indonesia

INTERNAL WORKSHOP AT DEPARTMENT OF FOOD SCIENCE AND TECHNOLOGY, BOGOR AGRICULTURAL UNIVERSITY

19-20 December 2019

- Conventional and advance sensory methods, statistical approach for analysing sensory data, and practical on how to analyse sensory data from various sensory methods using R and SenseHub

### R in food sensory research

Bandung, Indonesia

KOMUNITAS R INDONESIA MEETUP AT BANDUNG INSTITUTE OF TECHNOLOGY

15 November 2018

- Application of R for linking food properties and consumer preference, food production optimisation, and detection of chewing activity

### SenseHub: an integrated web application for sensory analyses

Malang, Indonesia

INTERNATIONAL COFERENCE ON GREEN AGROINDUSTRY AND BIOECONOMIC (ICGAB)

19 September 2018

- Research methods in sensory science, discussion of available software for sensory analyses, proposal of new sensory software named SenseHub and its comparison with existing statistical software

## Developed Software

**R package** Syahputra, MA. (2019). sensehubr: a tidy tools for sensory data analysis.

**R package** Syahputra, MA. (2019). bandungjuara: an R interface for accessing Open Data Kota Bandung.

**R package** Syahputra, MA. (2019). jakartaraya: an R interface for accessing Open Data Kota Jakarta.

**R package** Syahputra, MA. (2019). nusandata: a curated datasets about Indonesia.

**Web apps** Syahputra, MA. (2019). SenseQuest: an web application for sensory data collection.

**Web apps** Syahputra, MA. (2018). SenseHub: an integrated web application for sensory analysis.

**Web apps** Irawan, DE., Syahputra, MA. (2018). Aquastats: a web application for groundwater data analyses.

**Web apps** Irawan, DE., Syahputra, MA. (2018). Thermostats: a web application for hot water data analyses.

**Web apps** Syahputra, MA. (2018). MCDM: a shiny application for performing Multiple Criteria Decision Making (MCDM).